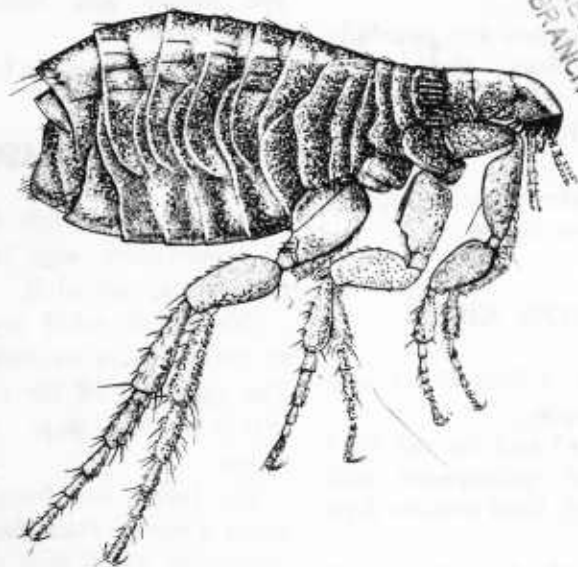


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CONTROLLING

FLEAS



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HOME AND GARDEN BULLETIN NO. 121
U. S. DEPARTMENT OF AGRICULTURE

CONTROLLING FLEAS

Fleas often breed in large numbers where pets and livestock are kept. They spread through homes, buildings, and yards. They attack pets, livestock, poultry, and people.

Pets infested with fleas scratch and bite themselves almost constantly. Their coats become soiled and roughened, and their skin becomes irritated.

Domestic animals are painfully annoyed by fleas, and young chickens and other poultry are sometimes killed by heavy infestations.

You can control fleas by applying proper insecticides.

COMMON KINDS

Many kinds of fleas attack animals and people.

The dog flea¹ and the cat flea² are the most widespread and abundant. Each kind attacks dogs and cats.

The human flea,³ a severe pest in many areas, lives on numerous animals. It is often found on hogs, and it breeds in hog houses. It also lives on dogs, cats, goats, and domestic rats and on wild animals such as skunks, coyotes, and badgers.

It most often is found in the Mississippi Valley, in Texas, and westward to the Pacific coast.

The sticktight flea⁴ infests poultry and occasionally annoys people and pets in the Southern States.

Several species of rat fleas, particularly the oriental rat flea,⁵ infest houses and buildings that harbor rats.

All of these fleas can bite people.

DEVELOPMENT

Fleas pass through four stages of development—egg, larva (maggot), pupa, and adult.

The female adult lays eggs on an animal or in its sleeping place. The eggs fall off the animal and, within a few days, hatch into larvae.

The larvae are fully grown in about 2 weeks; then they spin tiny cocoons in which they change into pupae.

The pupae change into adults in about 1 week and emerge from the cocoons.

Adult fleas can live several weeks without food. This is why owners of dogs or cats sometimes return

¹ *Ctenocephalides canis*.

² *C. felis*.

³ *Pulex irritans*.

⁴ *Echidnophaga gallinacea*.

⁵ *Xenopsylla cheopis*.

SAND FLEAS

Although fleas found in sandy places often are called "sand fleas" there is no flea by this name. Many kinds of fleas develop in sandy places—as a result of being dropped there (as eggs or adults) by flea-infested animals.

from vacation to find their homes overrun with fleas, even though no adult fleas were in evidence when they left for vacation.

Fleas feed on animal or human blood; they cannot breed or survive without it.

CONTROL WITH INSECTICIDES

The kind and amount of insecticide needed to kill fleas depend on (1) the kind of animal that is infested and (2) whether an infestation is inside or outside a home. Insecticides used in the home differ from those used in other locations.

Control of fleas on animals is necessary to prevent infestations in homes, animal quarters, and yards.

Fleas on Animals

Dogs and Cats

Malathion, methoxychlor, rotenone, or pyrethrum (pyrethrins) will kill fleas on dogs and cats. You can buy these insecticides ready for use as flea powders or sprays.

Powders.—Use a powder that

contains no more than: 5 percent of malathion, 5 percent of methoxychlor, 1 percent of rotenone, or 1 percent of pyrethrins. Flea powders sold for dogs and cats often contain several of these insecticides combined—each at a lower concentration than those listed above.

Sprays.—Use a spray that has not more than 0.5 percent of malathion or methoxychlor.

Use insecticides carefully. Follow directions on the container. Don't be alarmed if your dog or cat shows discomfort for a few minutes after the application. Insecticides often cause increased activity by the fleas in their last moments of life. If the animal has free run, treatments may have to be repeated to keep fleas under control. (Treat the animals only as often as suggested on the container label.) If the animal is confined to an area free of fleas, one treatment usually is enough.

Fleas begin to leave the animal within a few minutes after a pyre-



N-14410

Applying powder for control of fleas.



N-14411

Rubbing powder into dog's hair.

thrum powder is applied, but they are only paralyzed and may recover. Treat the animal outdoors or in an enclosure where the paralyzed fleas can be swept up and destroyed.

Chickens

Sticktight fleas may be a problem on chickens. Spray infested chickens with a 0.5-percent malathion spray (see chart) or treat them with 5-percent malathion dust.

Fleas in Animal Quarters and Yards

To destroy fleas in dairy barns and poultry houses, use malathion. In other barns and animal quarters, in yards and lawns, and under houses, spray or dust with the insecticides recommended under "Fleas on Animals" or apply a 1-percent ronnel spray (see chart). If animal quarters or pens are littered, remove the litter before spraying or dusting.

Spraying.—Apply spray at the rate of 2 gallons to 1,000 square

feet (but apply 1 gallon of 1-percent ronnel). Use a garden-type compressed-air sprayer or small power sprayer.

Dusting.—Apply malathion dust at the rate of 1 pound per 40 square feet in poultry quarters. Apply 1 to 2 pounds per 1,000 square feet in dog kennels or goat or hog quarters.

Apply methoxychlor dust at 1 pound per 1,000 square feet, but only in dogs, goat (except milk goat), and hog quarters. Dusts often can be blown under low buildings where spraying would be difficult.

Fleas in Homes

Sprays that contain methoxychlor, malathion, or ronnel will destroy fleas in homes.

Apply a 5-percent methoxychlor spray or 2-percent malathion spray to floors and baseboards and to walls to a height of about 1 foot. Apply a light mist to upholstering, rugs, and other fabrics; a heavy spray may stain fabrics. Before spraying, clean rooms and up-



N-14414

Dusting under doghouse for control of fleas.

GUIDE FOR MIXING SPRAYS

Insecticides and some of the forms in which they may be purchased	Percentage of insecticide desired in spray	Approximate amount of purchased product to mix with 5 gallons of water
METHOXYCHLOR		
50-percent wettable powder.....	0. 5	6 ounces.
25-percent emulsifiable concentrate.....	. 5	1 pint.
MALATHION		
25-percent wettable powder.....	. 5	12 ounces.
57-percent emulsifiable concentrate.....	. 5	6 ounces.
RONNEL		
24-percent emulsifiable concentrate.....	1. 0	1½ pints.

holstered furniture with a vacuum cleaner.

To prepare sprays for use in homes: Mix 6¼ tablespoons of 25-percent methoxychlor emulsifiable concentrate, or 3¾ teaspoons of 50 to 55-percent malathion emulsifiable concentrate in 1 pint of water.

If you apply a ronnel spray, see that it is labeled for home use and follow instructions on the label.

USE OF PESTICIDES

This publication is intended for nationwide distribution. Pesticides are registered by the Environmental Protection Agency (EPA) for countrywide use unless otherwise indicated on the label.

The use of pesticides is governed by the provisions of the Federal Insecticide, Fungicide, and Rodenticide Act, as amended. This Act is administered by EPA. According to the provisions of the Act "It shall be unlawful for any person to use

any registered pesticide in a manner inconsistent with its labeling." (Section 12(a)(2)(G))

EPA has interpreted this Section of the Act to require that the intended use of the pesticide must be on the label of the pesticide being used or covered by a Pesticide Enforcement Policy Statement (PEPS) issued by EPA.

The optimum use of pesticides, both as to rate and frequency, may vary in different sections of the country. Users of this publication may also wish to consult their Co-operative Extension Service, State Agricultural Experiment Stations, or County Extension Agents for information applicable to their localities.

The pesticides mentioned in this publication are available in several different formulations that contain varying amounts of active ingredient. Because of this difference in active ingredient the rates given in

this publication refer to the amount of active ingredient, unless otherwise indicated in the publication. Users are reminded to convert the rate in the publication to the strength of the pesticide actually being used. For example, 1 pound of active ingredient equals 2 pounds of a 50% formulation.

The user is cautioned to read and follow all directions and precautions given on the label of the pesticide formulation being used.

Federal and State regulations require registration numbers on all pesticide containers. Use only pesti-

cides that carry one of these registration numbers.

USDA publications that contain suggestions for the use of pesticides are normally revised at 2 year intervals. If your copy is more than 2 years old, contact your Cooperative Extension Service to determine the latest pesticide recommendations.

The pesticides mentioned in this publication were Federally registered for the use indicated as of the issue of this publication. The user is cautioned to determine the directions on the label or labeling prior to use of the pesticide.



Use Pesticides Safely
FOLLOW THE LABEL
U.S. DEPARTMENT OF AGRICULTURE

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